

CLAIMS

1. Method for thermal cleaning and separation of metal parts, preferably separating a stator (14) from an electric motor, where the stator windings are embedded in an organic and insulating material, where the stator is placed and heated under controlled conditions in a heating chamber (8), where the organic material is evaporated, whereby the windings are loosened, **characterised in that** the evaporated insulating organic material, often resin or varnish, is conducted via a closed pipe circuit (16) to at least one condensator (18), where the gaseous organic substances are condensed, and where condensate and air are conducted further on in the closed pipe system (16) to a partly liquid filled vessel (24), from where the now cleaned air is conducted back to the heating chamber (8) to a new cycle.

2. Method for thermal cleaning and separation of metal parts according to claim 1, **characterised in that** the condensing is effected by the hot gas containing the organic substances is conducted into a condensator (18), where the gas is brought into contact with liquid (22) from the vessel (24), where the liquid (22) has a large surface, whereby the gas is cooled so that it condenses, preferably is added to the liquid (22) via number of nozzles (20) from where it is atomised in/supplied to the condensator (18).

3. Method for thermal cleaning and separation of metal parts according to claim 1, **characterised in that** the partly liquid filled vessel (24) contains air and tap water (22), preferably tap water supplied with additives increasing the ability of the water (22) to bind the released organic substances.

4. Method for thermal cleaning and separation of metal parts according to claims 1 – 3, **characterised in that** the system (2) is a closed circuit, where all flue gases are absorbed in the liquid (22) as condensate, and where fresh air is not added during the process.

5. Method for thermal cleaning and separation of metal parts according to any of

claims 1 – 4, **characterised in that** the cleaned air, which is conducted back to the heating chamber (8) for a new cycle, contains water vapour.

5 6. Machine for thermal cleaning and separation of metal parts, preferably a stator (14) from an electric motor, where the stator windings are embedded in an organic and insulating material, where the stator (14) is provided and heated under controlled conditions in a heating chamber (8), where the organic material is evaporated, whereby the windings are loosened, **characterised in that** the heating chamber (8) is connected to
10 at least one condensator (18) via a closed pipe system (16), where the gaseous organic substances are condensed, and where condensate and air are conducted further on in the closed pipe system (16) to a partly liquid filled vessel (24), from where the now cleaned air via a second closed pipe system (32) is conducted back to the heating chamber (8) for a new cycle.

15 7. Machine for thermal cleaning and separation of metal parts according to claim 6, **characterised in that** the condensator (8) is equipped with a number of nozzles (20) that atomise liquid (22) from the vessel (24) into the gas stream, which is thereby cooled so that it condenses, and where the atomised liquid is supplied from the liquid vessel (22).

20 8. Machine for thermal cleaning and separation of metal parts according to claim 6, **characterised in that** the pipe system (32) between liquid vessel (24) and heating chamber (8) is equipped with a temperature sensor.

25 9. Machine for thermal cleaning and separation of metal parts according to claim 6, **characterised in that** the door of the heating chamber (8) is designed as a pressure relief flap.